

In the Matter of:

Third Periodic Review of the
Commission's Rules and Policies
Affecting the Conversion
To Digital Television

MB Docket No. 07-91

TRIBUNE BROADCASTING COMPANY

**TECHNICAL STATEMENT
CONCERNING SPECIAL CIRCUMSTANCES REGARDING
INTERFERENCE ANALYSIS FOR WGNO-DT AND WNOL-DT
NEW ORLEANS, LOUISIANA**

This Technical Statement concerns stations WGNO-DT and WNOL-DT, both in New Orleans, Louisiana. WGNO-DT is authorized for pre-transition digital operation on Channel 15 in New Orleans and is proposed for post-transition operation on Channel 26. WNOL-DT is authorized for pre-transition digital operation on Channel 40 and for post-transition operation on Channel 15. The proposed new WGNO-DT and WNOL-DT facilities will be located on the existing Hearst tower in Chalmette and will employ a shared transmitting antenna that will accommodate digital Channels 15, 26 and 43. It is anticipated that WNOL-DT will operate on Channel 15 with a maximum effective radiated power (ERP) of 775 kW using the shared antenna and that WGNO-DT will operate on Channel 26 with a maximum ERP of 1000 kW using the shared antenna. The shared antenna radiation center will be located at a height of 287 m above mean sea level. Calculations of predicted interference for the Channels 15 and 26 digital facilities have been conducted according to FCC Office of Engineering and Technology Bulletin No. 69 (OET-69). These studies result in anomalous interference conditions to Class A stations WBXN-CA and WTNO-LP that is the subject of this statement.

Class A television station WBXN-CA is licensed for operation on Channel 18 with a maximum direction ERP of 5 kW and an antenna height of 305 m AMSL (FCC File No. BLTTA-20040525AGO). WBXN-CA holds a construction permit for operation on Channel 18 at a different site with a reduced maximum directional ERP of 2.3 kW an antenna height of 264 m AMSL (FCC File No. BPTTA-20070404ABX). WBXN-CA is related by taboo restrictions to both Channels 15 and 26.

Class A television station WTNO-LP is licensed for operation on Channel 36, but it has applied for operation on Channel 22 with a maximum direction ERP of 49.3 kW and an antenna height of 102 m AMSL (FCC File No. BDISTTA-20060630AGU). WTNO-LP is related by taboo restrictions to both Channels 15 and 26.

The facilities proposed on Channels 15 and 26 for digital stations WNOL-DT and WGNO-DT at the Hearst tower, including the directional antenna pattern information, are summarized in Figures 1 and 2 herein.

The proposed Hearst transmitter site is located 3.7 km south-southwest of the WGNO/WNOL tower, which is the authorized transmitter site for WGNO-DT and WNOL-DT. The proposed relocation of the WNOL-DT and WGNO-DT transmitter sites to the Hearst tower, to share the new combined transmitting antenna, requires an interference analysis to be conducted according to the procedures of OET-69. For both Channels 15 and 26, there are no full-service analog or digital interference issues of concern. However, there is taboo interference predicted with respect to taboo related Class A stations WBXN-CA and WTNO-LP as result of the anomaly in the FCC OET-69 analysis code.

The attached Figure 3 is a map showing the predicted 74 dBu protected service contours for stations WBXN-CA and WTNO-LP. Also shown on this map are the locations of the WGNO/WNOL tower site and the Hearst tower site. It will be observed that both tower sites are within the predicted protected 74 dBu contours of WBXN-CA and WTNO-LP.

The FCC OET-69 interference analysis indicates that there will be predicted impermissible interference to the WBXN-CA licensed and construction permit facilities from the proposed digital operations on Channels 15 and 26. The OET-69 interference analysis program also indicates that there would be impermissible interference from the Channel 26 facility to the both the WBXN-CA and WTNO-LP facilities. The results are summarized below:

- WBXN-CA (CP), Baseline population = 454,184; Predicted net interference from proposed Channel 15 facility = 5,058; 1.11% interference.
- WBXN-CA (Lic.), Baseline population = 638,408; Predicted net interference from proposed Channel 15 facility = 12,373; 1.94% interference.
- WBXN-CA (Lic.), Baseline population = 638,408; Predicted net interference from proposed Channel 26 facility = 12,373; 1.94% interference.
- WTNO-LP, Baseline population = 990,460; Predicted net interference from proposed Channel 26 facility = 13,437; 1.36% interference.

There are only one or two cells of interference that separately or together make up the predicted interference values to WBXN-CA and WTNO-LP. These cells are located within 1-km of the undesired Channel 15 and 26 transmitter sites. However, in reality there would be no interference to WBXN-CA or WTNO-LP. This is where the anomaly in the FCC OET-69 code has caused there to be predicted interference where none would ever exist in practice.

OET Bulletin No. 69 (February 6, 2004), in Table 8, indicates that the elevation pattern relative field factor to be assumed for full service digital facilities at angles exceeding 5 degrees below the horizon is 0.150. This is a conservative estimate of actual elevation patterns and it is generally consistent with the elevation patterns proposed for Channels 15 and 26. However, according to the OET-69 processing software code, all points within 1 kilometer of the undesired transmitter site default to an elevation pattern relative field factor of 1.000, regardless of the depression angle. This would be the equivalent of

having an ERP of 775 kW for Channel 15 and 1000 kW for Channel 26 directed at the ground surrounding the Hearst Tower. This is purely fictional and can never happen in practice. This anomaly is referenced in the FCC code as excerpted below from the OET-69 code file identified as “global.inc”:

```
c    mod2 - Set the vertical radiation factor to the last value
c           of the pattern array for points within 1 km of the
c           transmitter. The vertical radiation factor for
c           these points was erroneously set to unity in
c           computations for Appendix B tables of the 6th R&O
c           and the reconsideration orders.
```

This describes a correction in the FCC code called “mod2,” which was designed to fix this anomaly, but was never implemented in the FCC code. Further explanation on “mod2” is found in the OET-69 code in the file “options.inc”:

```
c    Corrections to program code since Appendix B tables of 6th
c    R&O and reconsideration orders. Per_6th_order causes all
c    these mods to be bypassed. That is, mod1, mod2, mod3 and
c    mod4 are effectively false if per_6th_order is true.
c
c    These mods are appropriate and presumably produce more
c    accurate results. Nevertheless, the FCC is currently
c    (February, 1999) processing applications for new or
c    modified facilities with per_6th_order set true.
c
c
c    :
mod2 = .false.    !Set reasonable value for vertical
                  radiation factor near TX
```

The above comments in the FCC OET-69 code indicate that the FCC’s OET-69 software uses an elevation relative field value of 1.000 for calculations to all points within 1 kilometer of the transmitter site. This is 16.5 dB greater than if the correct relative field factor of 0.15 as taken from Table 8 of OET Bulletin No. 69 were employed.

The depression angle from the WGNO-DT and WNOL-DT antenna at the Hearst site will vary from 16° to 90° from points from 1 km to the base of the Hearst tower. The normal relative field factor within this entire range is 0.15 per FCC OET Bulletin No. 69.

Clearly the use of an elevation relative field factor of 1.000 to calculate undesired signal levels within 1 km of the undesired transmitter site is erroneous. And the OET-69 software code itself states that the elevation relative field factor “was erroneously set to unity” and that the mods, or code corrections, “appropriately and presumably produce more accurate results”.

The anomaly in the FCC code did not result in predicted interference to the WBNX-CA and WTNO-LP facilities from the WGNO/WNOL tower site because there is no population located within 1 km of the WGNO/WNOL tower site. This is illustrated in Figure 3, which shows the 1-km circles around both the WGNO/WNOL tower and the Hearst tower. There are a large number of 2000 Census blocks located within 1 km of the Hearst tower, which is the reason for there being cell points for calculation within 1 km of the Heart tower site.

It is also sadly noted that the area within 1 km of the Hearst tower site is now largely devoid of population. The Chalmette area where the Hearst tower is located was subject to severe flooding as a result of the events of Hurricane Katrina in August 2005. Therefore, even if the anomaly in the analysis procedure were considered, there is now very low population located within 1 km of the Hearst tower site. So the predicted interference to WBNX-CA and WTNO-LP, when calculated incorrectly in the anomalous manner would be essentially zero.

It is concluded, that when computed correctly, taking into consideration the proper elevation pattern relative field factor of 0.15, there is no predicted interference to

WBXN-CA or WTNO-LP from either the WGNO-DT or WNOL-DT transmitting facilities at the Hearst tower site.

A handwritten signature in black ink, appearing to read "Louis R. du Treil, Jr.", written in a cursive style.

Louis R. du Treil, Jr.

du Treil, Lundin & Rackley, Inc.
201 Fletcher Ave.
Sarasota, FL 34237

August 13, 2007

Figure 1

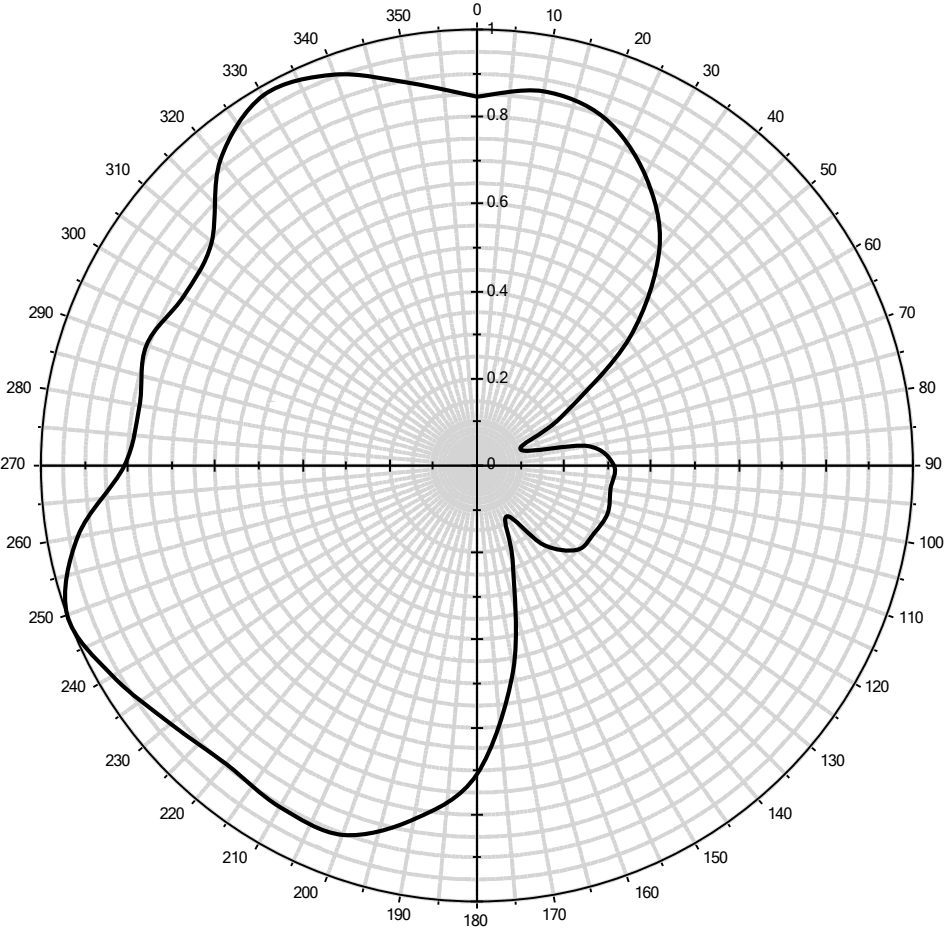
DA Inquiry

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Antenna Pattern: **Antenna ID:** 150001

HEARST ANTENNA
CHANNEL 15
ERP = 775 KW
RCAMSL = 287 M
29-56-59 NL
89-57-28 WL



Note: display reflects rotation of 0.00°

Antenna Details:

0°	0.846	60°	0.222	120°	0.310	180°	0.708	240°	0.965	300°	0.777
10°	0.872	70°	0.107	130°	0.300	190°	0.823	250°	1.000	310°	0.795
20°	0.850	80°	0.259	140°	0.237	200°	0.901	260°	0.929	320°	0.915
30°	0.770	90°	0.314	150°	0.135	210°	0.904	270°	0.809	330°	0.980
40°	0.651	100°	0.311	160°	0.241	220°	0.894	280°	0.786	340°	0.954
50°	0.457	110°	0.319	170°	0.477	230°	0.919	290°	0.807	350°	0.891

Antenna Make: DIE

Standard Pattern:

Antenna Model: TUF-C4SP-10/40U-1-T

Last Change Date:

Figure 2

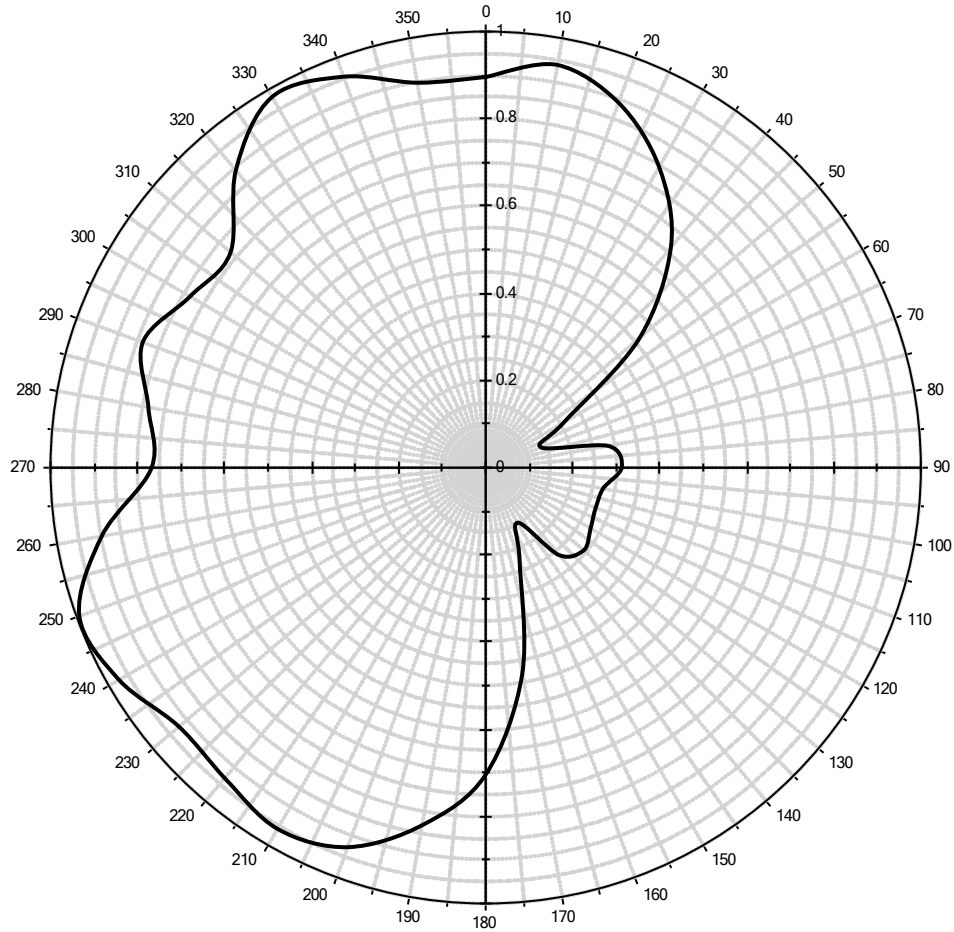
DA Inquiry

du Treil, Lundin, & Rackley, Inc., Sarasota, Florida



Antenna Pattern: **Antenna ID:** 260001

CHANNEL 26
ERP = 1000 KW
RCAMSL = 287 M
29-56-59 NL
89-57-28 WL



Note: display reflects rotation of 0.00°

Antenna Details:

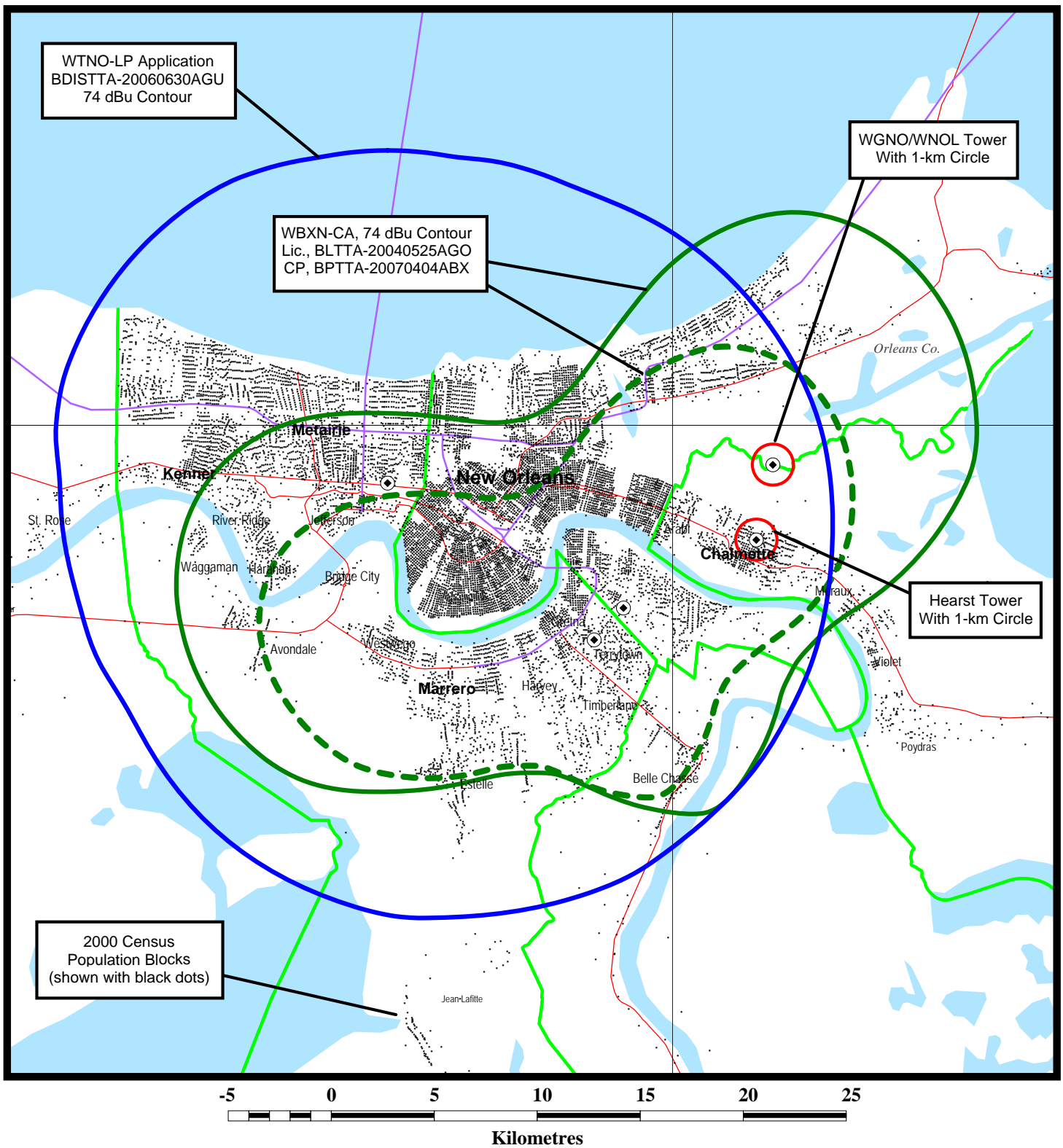
0°	0.896	60°	0.206	120°	0.278	180°	0.704	240°	0.973	300°	0.785
10°	0.938	70°	0.136	130°	0.294	190°	0.832	250°	0.994	310°	0.766
20°	0.891	80°	0.286	140°	0.262	200°	0.926	260°	0.895	320°	0.893
30°	0.796	90°	0.312	150°	0.146	210°	0.957	270°	0.768	330°	0.982
40°	0.662	100°	0.274	160°	0.228	220°	0.931	280°	0.787	340°	0.954
50°	0.459	110°	0.269	170°	0.481	230°	0.922	290°	0.839	350°	0.896

Antenna Make: DIE

Standard Pattern:

Antenna Model: TUF-C4SP-5450

Last Change Date:



PREDICTED SERVICE CONTOURS FOR WBXN-CA AND WTNO-LP WITH WGNO/WNOL AND HEARST TOWER SITES

duTreil, Lundin & Rackley, Inc. Sarasota, Florida